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Appln. No. 10/800,963
Response A, dated January 7, 2005
Reply to Office Action of October 20, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 to 36. (canceled)

37. (new) A process of preparing a hydro-oxidation catalyst composition comprising gold on a titanium-containing support, the catalyst composition being capable of oxidizing an olefin with oxygen in the presence of hydrogen to form an olefin oxide, the preparation process comprising impregnating a gold compound and impregnating a reducing agent onto a catalyst support, wherein the catalyst support is selected from the group consisting of titanosilicates and titanium dispersed on silica; and wherein the reducing agent is an organic compound that does not contain titanium; and wherein the molar ratio of reducing agent to gold is greater than 0.5:1; the impregnation being conducted under conditions sufficient to prepare the hydro-oxidation catalyst composition.

38. (new) The process of Claim 37 wherein the gold compound is selected from the group consisting of chloroauric acid, sodium chloroaurate, potassium chloroaurate, gold cyanide, potassium gold cyanide, diethylamine auric acid trichloride, gold acetate, alkyl gold halides, and alkali aurates.

39. (new) The process of Claim 37 wherein the process is conducted at a gold loading of greater than about 10 parts per million by weight, based on the total weight of the gold and support.

40. (new) The process of Claim 37 wherein the reducing agent is selected from the group consisting of sugars, carboxylic acids and salts thereof, alcohols and alkoxide salts thereof, alkanolamines, alkylamines, and mixtures thereof.

41. (new) The process of Claim 37 wherein the reducing agent is selected from the group consisting of C₆₋₂₀ sugars, C₂₋₂₀ carboxylic acids, C₁₋₁₅ aliphatic

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alcohols, C₁₋₁₅ alkylamines, the alkali and alkaline earth salts of the aforementioned sugars, carboxylic acids, and alcohols, and mixtures of any of the aforementioned compounds.

42. (new) The process of Claim 37 wherein the reducing agent is selected from the group consisting of methanol, ethanol, isopropanol, ethanolamine, acetic acid, lactic acid, citric acid, maleic acid, cinnamic acid, sodium acetate, sodium lactate, sodium citrate, sodium cinnamate, sodium maleate, and mixtures thereof.

43. (new) The process of Claim 37 wherein the molar ratio of reducing agent to gold is greater than about 1:1.

44. (new) The process of Claim 37 wherein the reducing agent is deposited onto the support prior to or simultaneous with deposition of the gold compound.

45. (new) The process of Claim 37 wherein the process is conducted at a titanium loading on the support of greater than about 0.02 and less than about 20 weight percent, based on the weight of the support.

46. (new) The process of Claim 37 wherein at least one promoter metal compound is impregnated onto the support.

47. (new) The process of Claim 46 wherein the promoter metal is selected from the group consisting of silver, Group 1, Group 2, the lanthanide rare earth metals, the actinide metals of the Periodic Table, and mixtures thereof.

48. (new) The process of Claim 46 wherein the promoter metal(s) is employed in a total concentration ranging from greater than about 0.01 to less than about 20 weight percent, based on the total weight of the catalyst.

49. (new) The process of Claim 37 wherein a solvent for the impregnation is selected from the group consisting of water, organic solvents, and mixtures thereof.

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50. (new) The process of Claim 37 wherein after impregnation, the support is washed; and wherein after washing, optionally, the support is treated with a solution containing at least one promoter metal.

51. (new) The process of Claim 37 wherein the impregnation is conducted to the point of incipient wetness or a point of lesser wetness.

52. (new) The process of Claim 37 wherein the impregnation is conducted at a temperature between about 21°C and about 100°C.

53. (new) The process of Claim 37 wherein after impregnation and any optional steps of washing and treating with a promoter metal, the catalyst is heated at a temperature greater than about 250°C and less than about 800°C in oxygen or an oxygen-containing gas, or heated in an inert atmosphere, or heated in a reducing atmosphere.

54. (new) The process of Claim 37 wherein the olefin is propylene.